

CLAIMS:

1. An optical component producing apparatus for forming a multi-layer film, which is composed of alternately stacked layers different in optical characteristic, on a base, said apparatus comprising:

film formation means for forming said multi-layer film on said base;

measurement means for measuring an optical characteristic of said optical component obtained by forming said multi-layer film on said base; and

control means for controlling a thickness of a portion of said multi-layer film to be formed by said film formation means on the basis of the measured optical characteristic of said optical component.

2. An optical component producing apparatus according to claim 1, wherein said measurement means measures a transmittance of said optical component; and

said control means terminates the film formation by said film formation means at said portion of said multi-layer film when said measured transmittance of said optical component is changed to be decreased.

3. An optical component producing apparatus according to claim 2, further comprising removal means for removing the layer portion formed during a period of

time from a time point when the increase/decrease of the measured transmittance of said optical component is stopped to a time point when the measured transmittance is changed to be decreased.

4. An optical component producing apparatus according to claim 1, wherein said control means controls a thickness of one layer of said plurality of alternately stacked layers, said one layer having a higher refractive index and being positioned near the uppermost surface remotest from said base.

5. An optical component producing method for forming a multi-layer film, which is composed of alternately stacked layers different in optical characteristic, on a base, said method comprising:

measuring an optical characteristic of said optical component obtained by forming said multi-layer film on said base; and

controlling, on the basis of the measured optical characteristic of said optical component, a thickness of a portion of said multi-layer film to be formed on said base.

6. An optical component producing method according to claim 5, wherein said measurement step comprises the step of measuring a transmittance of said optical

component; and

said control step comprises the step of terminating the film formation at said portion of said multi-layer film when said measured transmittance of said optical component is changed to be decreased.

7. An optical component producing method according to claim 6, further comprising removal step of removing a layer portion formed during a period of time from a time point when the increase/decrease of the measured mean light transmittance of said optical component is stopped to a time point when the measured mean light transmittance is changed to be decreased.

8. An optical component producing method according to claim 5, wherein said control steps comprises the step of controlling a thickness of one layer of said plurality of alternately stacked layers, said one layer having a higher refractive index and being positioned near the uppermost surface remotest from said base.

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